I CLAIM:

1. A method for reducing charge diffusion crosstalk, comprising:

inputting crosstalk coefficients for a first pixel of a first color for reducing diffusion crosstalk caused by electrons migrating to the first pixel from adjacent pixels of colors that are different from the first color;

sampling the first pixel to produce a first measured pixel value;

sampling the adjacent pixels to produce adjacent measured pixel values; and

applying the crosstalk coefficients to the first measured pixel value and the adjacent measured pixel values such that crosstalk effects are reduced in the first measured pixel value.

2. The method of claim 1, wherein the adjacent pixels are selected from a group consisting of pixels immediately surrounding the first pixel.

3. The method of claim 1, wherein the adjacent pixels of different colors are of two colors that are different from the first color.

4. The method of claim 1, further comprising applying color correction coefficients to the first measured pixel value and the adjacent measured pixel values such that the first pixel color filter spectral response is improved in the first measured pixel value.

5. The method of claim 4, wherein the crosstalk coefficients and the color correction coefficients are combined.

6. The method of claim 1, wherein the crosstalk coefficients are combined with color correction coefficients before the crosstalk coefficients are applied to the first measured pixel value.

7. The method of claim 1, wherein the crosstalk coefficients are applied using no more than three multipliers and no more than two adders.

8. An apparatus for reducing charge diffusion crosstalk, comprising:

means for inputting crosstalk coefficients for a first pixel of a first color for reducing diffusion crosstalk caused by electrons migrating to the first pixel from adjacent pixels of colors that are different from the first color;

means for sampling the first pixel to produce a first measured pixel value;

means for sampling the adjacent pixels to produce adjacent measured pixel values; and

means for applying the crosstalk coefficients to the first measured pixel value and the adjacent measured pixel values such that crosstalk effects are reduced in the first measured pixel value.

9. The apparatus of claim 8, wherein the adjacent pixels are selected from a group consisting of pixels immediately surrounding the first pixel.

10. The apparatus of claim 8, wherein the adjacent pixels of different colors are of two colors that are different from the first color.

11. The apparatus of claim 8, further comprising means for applying color correction coefficients to the first measured pixel value and the adjacent measured pixel values such that the first pixel color filter spectral response is improved in the first measured pixel value.

12. The apparatus of claim 11, wherein the crosstalk coefficients and the color correction coefficients are combined.

13. The apparatus of claim 8, wherein the crosstalk coefficients are combined with color correction coefficients before the crosstalk coefficients are applied to the first measured pixel value.

14. The apparatus of claim 8, wherein the crosstalk coefficients are applied using no more than three multiplier means and no more than two adder means.

15. An apparatus for reducing charge diffusion crosstalk, comprising:

a first pixel that is arranged to produce a first measured pixel value in response to received filtered light;

a group of adjacent pixels that are arranged to produce adjacent measured pixel values in response to received filtered light on each pixel of the group of adjacent pixels;

a memory comprising crosstalk coefficients for reducing diffusion crosstalk caused by electrons migrating to the first pixel from adjacent pixels of colors that are different from the first color; and

an arithmetic processor that is configured to apply the crosstalk coefficients to the first measured pixel value and the adjacent measured pixel values such that first order crosstalk effects are reduced in the first measured pixel value.

16. The apparatus of claim 15, wherein the group of adjacent pixels consists of pixels immediately surrounding the first pixel.

17. The apparatus of claim 15, wherein the adjacent pixels of different colors are of two colors that are different from the first color.

18. The apparatus of claim 15, wherein the arithmetic processor is further configured to apply color correction coefficients to the first measured pixel value and the adjacent measured pixel values such that the first pixel color filter spectral response is improved in the first measured pixel value.

19. The apparatus of claim 15, wherein the crosstalk coefficients are applied using no more than three multiplier means and no more than two adder means.